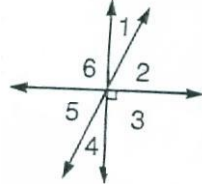
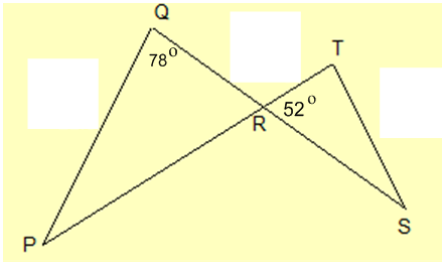


1. Which two angles are complementary?

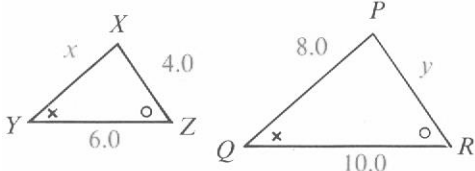
a)  $\angle 1, \angle 5$     b)  $\angle 2, \angle 6$     c)  $\angle 3, \angle 4$     d)  $\angle 1, \angle 4$
- 

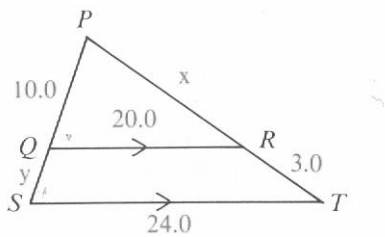
2. Which angle is supplementary to  $60^\circ$ ?    a)  $30^\circ$     b)  $60^\circ$     c)  $120^\circ$     d)  $240^\circ$
3. What is the measure of angle P?


4. An apartment building casts a shadow. From the tip of the shadow to the top of the building is 100 m. The tip of the shadow is 72 m from the base of the building. How tall is the building, to the nearest tenth of a metre?

5. A communications tower is supported by four guy wires. The tower is 155 m tall, and each guy wire is staked into the ground at a distance of 30 m from the base of the tower. What is the total length of wire used to support the tower?
- a) 608 m                      b) 632 m                      c) 152 m                      d) 158 m

6. Find the length of x and y, respectively.
- a)  $x=13.3, y=2.4$                       b)  $x=6.7, y=4.8$                       c)  $x=2.4, y=13.3$                       d)  $x=4.8, y=6.7$



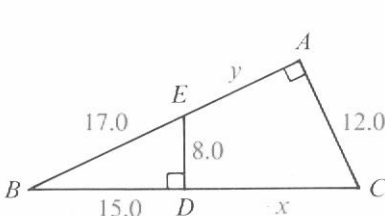


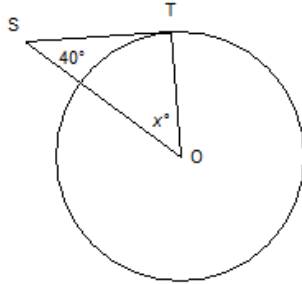
7. Find the length of x and y, respectively.

a)  $x=15, y=2$                       b)  $x=12, y=2.5$                       c)  $x=9, y=5$                       d)  $x=2.5, y=12$

8. Find the length of x and y, respectively.

a)  $x=7.5, y=8.5$                       b)  $x=22.5, y=25.5$                       c)  $x=10.5, y=5.5$                       d)  $x=25.5, y=22.5$

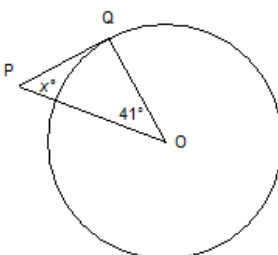




9. O is the centre of this circle and point T is a point of tangency. Determine the value of x.

a)  $90^\circ$                       b)  $50^\circ$                       c)  $130^\circ$                       d)  $40^\circ$

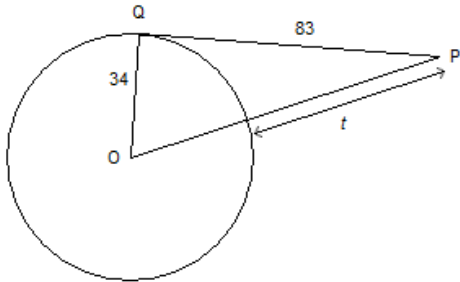
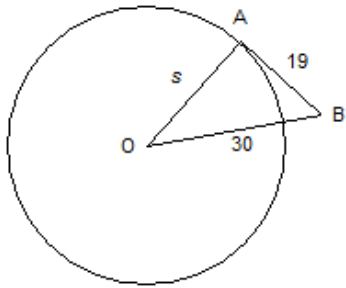
10. O is the centre of this circle and point Q is a point of tangency. Determine the value of x.



a)  $139^\circ$                       b)  $49^\circ$                       c)  $41^\circ$                       d)  $90^\circ$

11. O is the centre of this circle and point A is a point of tangency. Determine the value of  $s$ . If necessary, give your answer to the nearest tenth.

- a) 5.5      b) 11      c) 23.2      d) 35.5



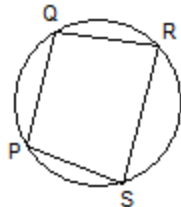
12. O is the centre of this circle and point Q is a point of tangency. Determine the value of  $t$ . If necessary, give your answer to the nearest tenth.

- a) 61.3      b) 55.7      c) 55      d) 82.2

13. Which of the following constructions would enable you to determine the centre of this circle?

- i) Draw the perpendicular bisectors of PS and PQ.  
 ii) Join PR and QS.  
 iii) Join the mid-points of PS and QR and the mid-points of PQ and SR.

- a) i and iii      b) iii      c) i      d) ii

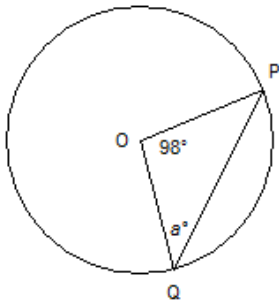
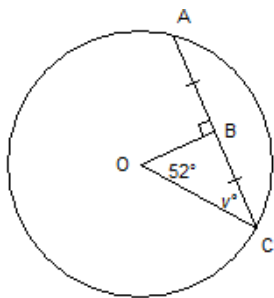


14. A circle has radius 7 cm. Which of the following measures could NOT be the length of a chord in the circle: 2 cm, 11 cm, 14 cm, or 17 cm?

- a) 17 cm      b) 11 cm      c) 2 cm      d) 14 cm

15. O is the centre of the circle. Determine the value of  $v$ .

- a)  $19^\circ$       b)  $71^\circ$       c)  $52^\circ$       d)  $38^\circ$

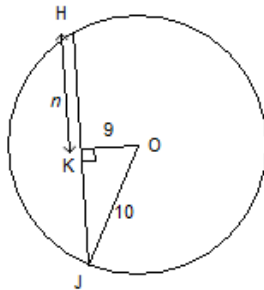
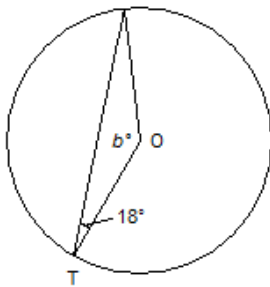


16. O is the centre of the circle. Determine the value of  $a$ .

- a)  $49^\circ$       b)  $20.5^\circ$       c)  $41^\circ$       d)  $69.5^\circ$

17. O is the centre of the circle. Determine the value of  $b$ .

- a)  $144^\circ$       b)  $81^\circ$       c)  $72^\circ$       d)  $18^\circ$

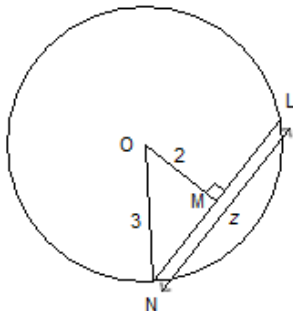


18. O is the centre of the circle. Determine the value of  $n$  to the nearest tenth, if necessary.

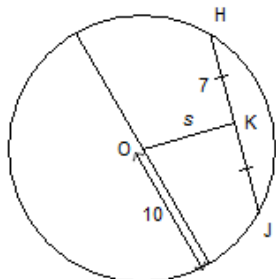
- a) 13.5      b) 4.4      c) 19      d) 1

19. O is the centre of the circle. Determine the value of  $z$  to the nearest tenth, if necessary.

- a) 4.5      b) 3.6  
 c) 5      d) 1

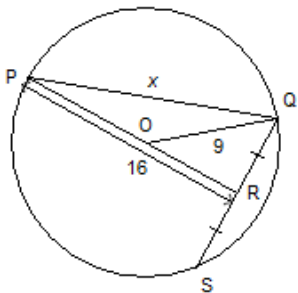


20. O is the centre of the circle. Determine the value of  $s$  to the nearest tenth, if necessary.



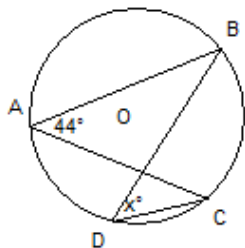
- a) 3
- b) 7.1
- c) 12.2
- d) 51

21. O is the centre of the circle. Determine the value of  $x$  to the nearest tenth, if necessary.



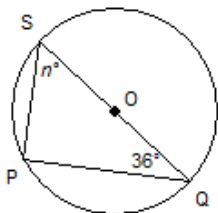
- a) 5.7
- b) 19.6
- c) 288
- d) 17

22. O is the centre of the circle. Determine the value of  $x$ .



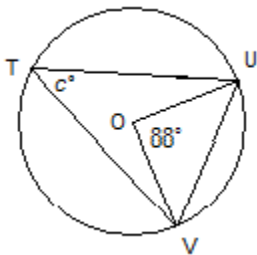
- a)  $44^0$
- b)  $90^0$
- c)  $180^0$
- d)  $88^0$

23. O is the centre of the circle. Determine the value of  $n$ .



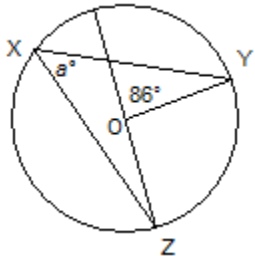
- a)  $108^0$
- b)  $54^0$
- c)  $90^0$
- d)  $36^0$

24. O is the centre of the circle. Determine the value of  $c$ .



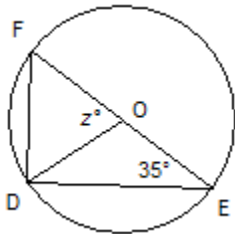
- a)  $90^0$
- b)  $44^0$
- c)  $180^0$
- d)  $88^0$

25. O is the centre of the circle. Determine the value of  $a$ .



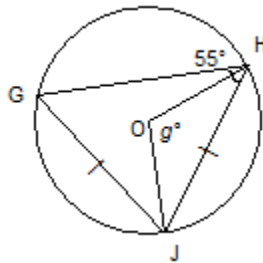
- a)  $47^0$
- b)  $86^0$
- c)  $94^0$
- d)  $90^0$

26. O is the centre of the circle. Determine the value of  $z$ .



- a)  $55^0$
- b)  $110^0$
- c)  $90^0$
- d)  $70^0$

27. O is the centre of the circle. Determine the value of g.



- a)  $70^{\circ}$
- b)  $55^{\circ}$
- c)  $110^{\circ}$
- d)  $90^{\circ}$

28. Haley will not go on a cruise because the boat may sink even though cruise ships are very rarely involved in accidents. On what is her decision based?
- a) Subjective judgment
  - b) Experimental probability
  - c) A combination of theoretical and experimental probability
  - d) Theoretical probability
29. According to the weather forecast, there is a 90% chance of snow, with accumulations of up to 10 cm. Andrew drives out to see his friends because he thinks the weather will not be as bad as it is forecasted to be. On what is his decision based?
- a) Subjective judgment
  - b) Experimental probability
  - c) A combination of theoretical and experimental probability
  - d) Theoretical probability
30. In an anonymous survey, students were asked:  
 “Do you agree that everyone should become a vegetarian?”  
 In this survey, which of the following might be a problem?
- a) Cultural sensitivity
  - b) Ethics
  - c) Privacy
  - d) Use of Language
31. Omar asked his classmates the following question.  
 “Don’t you think apartment buildings should allow residents to have cats?”  
 Which of the following might be a problem with his survey?
- a) Timing
  - b) Bias
  - c) Privacy
  - d) Cost
32. A cosmetics company wants to determine which eye shadow colours are preferred by the readers of a certain fashion magazine. What is the population they are interested in surveying?
- a) People who purchase the magazine
  - b) People who wear eye shadow
  - c) People who read the magazine
  - d) Fashion experts featured in the magazine
33. Which of the following data collection methods would provide the most accurate information about grade 9 students’ lunch choices at a school?
- a) Survey a sample of students who eat lunch in the cafeteria
  - b) Survey all the students who eat lunch in the cafeteria
  - c) Survey a sample of all students in grade 9 in the school
  - d) Survey all grade 9 students in the school
34. A baker wants to check the quality of the muffins he bakes each day.  
 Which of the following data collection methods would provide the most accurate information?
- a) Test one muffin from each batch
  - b) Test all the muffins in the first batch
  - c) Test all the muffins in a random batch
  - d) Test all the muffins in the last batch
35. A town council wants to know the public’s opinion about increasing taxes to pay for more housing for the homeless. They hire people to conduct door-to-door interviews in randomly selected areas of town. Which sampling method did the town council use?
- a) Self-selected sampling
  - b) Systematic sampling
  - c) Simple random sampling
  - d) Cluster sampling
36. A mobile phone company wants to know if its customers would be willing to pay a higher monthly fee for a plan that would cover international calls to Europe. To gather data, they make a list of cell phone numbers that regularly make calls to Europe and use a computer program to randomly select numbers from this list to call and survey. Which sampling method did the company use?
- a) Simple random sampling
  - b) Self-selected sampling
  - c) Systematic sampling
  - d) Convenience sampling